2001 Leonid Meteor Storm Timeline
(All times are in GMT)

Instrument Power OFF
(01/322 Sunday, November 18)

This year's LEO models predict three peaks (1766 trail, 1799 trail, and combined 1699 and 1866 trail):

Peak 1 centered at 10:00z (5 am local) lasting two hours with a projected ZHR peak of about 2,500.
Peak 2 centered at 13:00z (8 am local) lasting all day with a projected ZHR peak of about 1,400.
Peak 3 centered at 18:00z (1 pm local) lasting three hours with a projected ZHR peak of about **16,000**.

1. Start MPWROFF procedure (duration 2 min)   01/322-06:43 171 event   1st Peak Center - 3 Hrs
        Turn Receivers OFF
        Spin Down TMI
        Open TMI Relay
        Close TMI Survival Heater Relay

2. Start LPWROFF procedure (duration 30 sec)   01/322-06:43 171 event   1st Event
        Open LIS Relay

Modify ULIMOFF Limit Procedure for new Instrument Configuration.
Notify PACOR-A that TMI and LIS are now OFF until further notice.
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3. Start PROFF procedure (duration 1 min 40 sec) 01/322-07:37 TDS event   2nd Event
        Place PR in Health Check Mode
        Turn FCIF OFF
        Turn RF Power Supply OFF
        Turn SCDP Powered OFF

4. Start VRADCDRCL procedure (duration 2 min) 01/322-07:37 TDS event   2nd Event
        Selected Primary Door Drive
        Closed Rad Cooler Door

5. Start VPWROFF procedure (duration 1 min)   01/322-07:37 TDS event   2nd Event
        Power off Scan
        Open VIRS Relay

Modify ULIMOFF Limit Procedure for new Instrument Configuration.
Notify PACOR-A that PR and VIRS are now OFF until further notice.

Monitor Non-Essential Bus Current, Battery Voltage, Battery 2 Cell 1 Voltages, Wheel Speeds, Sys Mom.

Note1: Solar Beta Angle for 01/322 is +9.7° to +6.8°.
Note2: This timeline is a summary only, and the official Command Requests contain the actual procedures.
Note3: Instrument shutdowns are separated into two events to minimize charge current on next orbit day.

Instrument Power ON

1. Start PRSTARTON procedure (duration 25 min)   <u>01/322-21:40 TDW event</u>   MD Go/No-Go Required
    Open PR K1 Survival Heater Relay   (3rd Peak Center + 3 Hrs)
    Turn SCDP ON
    Turn FCIF ON
    Turn RF Power Supply ON
    Turn Place PR in Standby Mode
    Start PTXCODE103 (duration 9 minutes) ***Do Not Touch Console***
    Start PRXCODE103 procedure (duration 7 minutes) ***Do Not Touch Console***
    Place PR in Observation Mode

2. Run PRNGOFFSET 8 times (duration 15 min) <u>01/322-21:40 TDW event</u>   1st Event
    Bin 1 Offset 6
    Bin 2 Offset 4
    Bin 3 Offset 3
    Bin 4 Offset 1
    Bin 46 Offset 1
    Bin 47 Offset 3
    Bin 48 Offset 4
    Bin 49 Offset 6

3. Change PR Attenuation to 9DB   <u>01/322-21:40 TDW event</u>   1st Event
Notify PACOR-A of PR On Time ; Modify ULIMOFF Limit Procedure for new Instrument Configuration.
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3. Start MPWRON procedure (2 min 15 sec)   <u>01/322-22:30 TDE event</u>   2nd Event
    Power TMI Survival Heaters OFF
    Close TMI Relay

4. Start MSPINUP procedure (duration 3 min)   <u>01/322-22:30 TDE event</u>   2nd Event
    Spin Up TMI

5. Start MRCVRSON procedure (duration 20 sec) <u>01/322-22:30 TDE event</u>   2nd Event
    Turn Receiver ON

6. Start LPWRON procedure (duration 2 min)   <u>01/322-22:30 TDE event</u>   2nd Event
    Close LIS relay
    Adjust LIS Thresholds

7. Start LISCONFIG procedure (duration 2:30 sec)<u>01/322-22:30 TDE event</u>   2nd Event
    Place LIS Background to 8 kbps
    Turn Off LIS Heater Autoselect

8. Start VPWRON procedure (duration 2 min)   <u>01/322-22:30 TDE event</u>   2nd or 3rd** Event
    Open VIRS relay
    Uplink VIRS Time Patch 1
    Uplink VIRS Time Patch 2
    Turn VIRS Scan Drive On

9. Start VOPSHTRS procedure (duration 40 sec)   01/322-23:26 TDW event   3rd Event
        Select Proper Heater

10. Start VNORMOUTGAS proc (duration 1:30 sec)   01/322-23:26 TDW event   3rd Event
        VOUTGAS_HTRS run as defined temperature
        setpoints are reached (follow Outgassing Timeline)

Notify PACOR-A of TMI, LIS, and VIRS On Times ; Modify ULIMOFF Procedure
****01/322-23:26 event (28 minutes) available as the 3rd event if needed*
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11. Start VINITOUTGAS_END & VRADCDROP 01/324-12:xxz event   Approx 36 hrs after
      to initiate conclusion of Outgassing Operations   Outgassing started
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12. Close PR K1 Survival Heater Relay   01/324-23:xxz event   Approx 48 hrs after Open

13. Start VOUTGAS_HTRS and VMISSMD to   01/325-xx:xxz event   As temperature
       conclude Outgassing Operations   threshold is met
Modify ULIMOFF Limit Procedure for new Instrument Configuration.

01/322 Pertinent Events for Leonids Activities and/or Health and Safety Monitoring

171	06:43-07:05
TDS	07:37-08:02
171	08:24-08:42
TDE	09:03-09:23
TDW	10:07-10:37
TDW	11:42-12:02
TDW	13:20-13:40
TDE	14:03-14:23
TDE	15:42-16:02
TDE	17:20-17:40
TDW	18:36-18:56
TDW	20:07-20:27
TDW	21:40-22:18
TDE	22:30-22:52
TDW	23:26-23:55
TDW	00:07-00:31